

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

**(19) World Intellectual Property Organization  
International Bureau**



A standard linear barcode is located at the bottom of the page, spanning most of the width. It is used for document tracking and identification.

**(43) International Publication Date  
2 March 2006 (02.03.2006)**

PCT

(10) International Publication Number  
**WO 2006/022363 A1**

(51) International Patent Classification<sup>7</sup>: H04B 3/54

(21) International Application Number: PCT/JP2005/015499

(22) International Filing Date: 19 August 2005 (19.08.2005)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:  
2004-243920 24 August 2004 (24.08.2004) JP

(71) Applicant (for all designated States except US): MAT-SUSHITA ELECTRIC INDUSTRIAL CO., LTD. [JP/JP]; 1006, Oaza Kadoma, Kadoma-shi, Osaka 5718501 (JP).

(72) Inventors; and

(75) Inventors/Applicants (for US only): YOSHIDA, Shigeo. OHMI, Shinichiro. YASUKAWA, Tohru. YAMAGUCHI, Tsuyoshi [JP/JP]; 1-4-40-410, Nonakaminami, Yodogawa-ku, Osaka-shi, Osaka 5320022 (JP).

(74) Agent: OGASAWARA, Shiro; Daisan-Longev' Bldg., 3-11, Enokicho, Suita-shi, Osaka 5640053 (JP).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:  
— with international search report

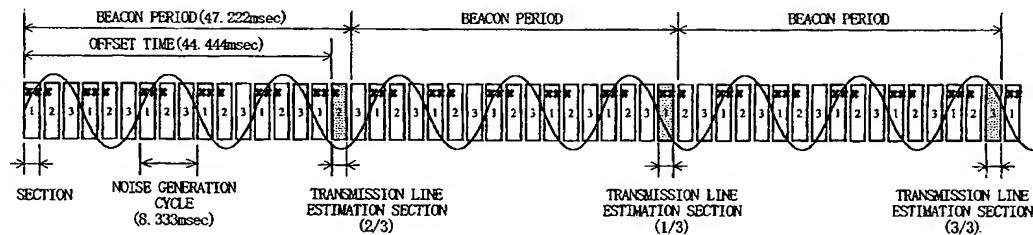
For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

**Published:**

— *with international search report*

*For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*

(54) Title: METHOD AND APPARATUS FOR POWER LINE COMMUNICATION



**(57) Abstract:** The variation cycle L of the characteristics of a transmission line is divided into a plurality of sections (n sections), a procedure is repeated in which transmission line estimation is performed for only one section among n sections in one beacon period, and thus transmission line estimation is performed for all of the n sections. The beacon period T is set based on  $(T=L \cdot Lm/n)$ , where n is an integer that is 2 or larger, and m is an integer that is n or larger and whose greatest common measure with n is 1.